Subpart J—Microwave Landing System (MLS)

SOURCE: Docket No. 20669, 51 FR 33177, Sept. 18, 1986, unless otherwise noted.

§ 171.301 Scope.

This subpart sets forth minimum requirements for the approval, installation, operation and maintenance of non-Federal Microwave Landing System (MLS) facilities that provide the basis for instrument flight rules (IFR) and air traffic control procedures.

§ 171.303 Definitions.

As used in this subpart:

Auxiliary data means data transmitted in addition to basic data that provide ground equipment siting information for use in refining airborne position calculations and other supplementary information.

Basic data means data transmitted by the ground equipment that are associated directly with the operation of the landing guidance system.

Beam center means the midpoint between the –3 dB points on the leading and trailing edges of the scanning beam main lobe.

Beamwidth means the width of the scanning beam main lobe measured at the –3 dB points and defined in angular units on the boresight, in the horizontal plane for the azimuth function and in the vertical plane for the elevation function.

Clearance guidance sector means the volume of airspace, inside the coverage sector, within which the azimuth guidance information provided is not proportional to the angular displacement of the aircraft, but is a constant fly-left or fly-right indication of the direction relative to the approach course the aircraft should proceed in order to enter the proportional guidance sector.

Control Motion Noise (CMN) means those fluctuations in the guidance which affect aircraft attitude, control surface motion, column motion, and wheel motion. Control motion noise is evaluated by filtering the flight error record with a band-pass filter which has corner frequencies at 0.3 radian/sec and 10 radians/sec for azimuth data and 0.5 radian/sec and 10 radians/sec for elevation data.

Data rate means the average number of times per second that transmissions occur for a given function.

Differential Phase Shift Keying (DPSK) means differential phase modulation of the radio frequency carrier with relative phase states of 0 degree or 180 degrees.

Failure means the inability of an item to perform within previously specified limits.

Guard time means an unused period of time provided in the transmitted signal format to allow for equipment tolerances.

Integrity means that quality which relates to the trust which can be placed in the correctness of the information supplied by the facility.

Mean corrective time means the average time required to correct an equipment failure over a given period, after a service technician reaches the facility.

Mean course error means the mean value of the azimuth error along a specified radial of the azimuth function.

Mean glide path error means the mean value of the elevation error along a specified glidepath of the elevation function.

Mean-time-between-failures (MTBF) means the average time between equipment failures over a given period.

Microwave Landing System (MLS) means the MLS selected by ICAO for international standardization.

Minimum glidepath means the lowest angle of descent along the zero degree azimuth that is consistent with published approach procedures and obstacle clearance criteria.

MLS Approach Reference Datum is a point at a specified height located vertically above the intersection of the runway centerline and the threshold.

MLS back azimuth reference datum means a point 15 meters (50 feet) above the runway centerline at the runway midpoint.

MLS datum point means a point defined by the intersection of the runway centerline with a vertical plane perpendicular to the centerline and passing through the elevation antenna phase center.

Out of coverage indication (OCI) means a signal radiated into areas outside the